

Indiana State Police Photogrammetry Information

This is a basic list of the equipment involved for the use of photogrammetry for the Indiana State Police for both “Photo Only” and “Full Software Photogrammetry” use. The prices quoted are the MSRP’s of the line items where it applies.

iWitness: This is the core software of the photogrammetry process. Produced by Dechant Consulting Services and a sole source provider of the product the retail cost of the BASIC version is \$995.00. The PRO Version is \$1995.00 with the only difference being the use of Automatic referencing of the photos with the help of the Automatic Referencing Targets. The general uses difference between the pro and the basic are the basic does the crash scenes or bigger scenes, because the automatic targets cannot be seen easily on these types of scenes. The PRO does very well with interior crimes scenes. This does NOT mean that the basic version cannot be used on the smaller scenes or crime scene, it can.

Weighted Markers: This also assists in the referencing of the photographs. The markers are “weighted dots” that the program can center in on and reference pixel to pixel from one photograph to another cutting the referencing time down considerably. The markers are weighted to aid in NOT getting blown around the scene during windy conditions. Cost is around \$450.00 from DeChant Consulting Service.

Cameras: The Indiana State Police started using the Olympus E420 10 megapixel camera. They then went to the Olympus E520’s as the 420’s were no longer produced for purchase. The next purchase of Camera was the Nikon D3000 and this is the current product of the ISP photogrammetry units. The basics behind the Camera are that 1) They must be of a higher megapixel 10+ for ease in seeing the farther “dots” in the photos. 2) They must be able to easily shut off autofocus as this is a requirement for accurate photogrammetry 3) They must be of the quality to be able to handle some police officer use of the camera. 4) Must be able to have an “A” or Shutter priority mode and an “M” or manual mode. Cost varies from local or online retailers.

Memory Cards: Used by the camera to hold the information obtained by the press of the shutter. This is the film of the camera. The size of the cards purchased by ISP has normally been 2gb but these are getting harder and harder to find. ANY size will work but this is the limit to the number of photos the camera can take. The cost again varies from retailer to retailer.

Crashzone software: This is the current choice of software to take the “DXF” file that the iWitness software provides and makes a basis for adding measurements, symbols, and text to

produce a final drawing to scale. Cost is around \$699.00 from Anna Ristau at Cadzone software.

Tripods: To assist in the stability of the night scene shooting of the camera. Holds the camera so as not to introduce blur into the photo's to produce a clear sharp photo even in low light. Cost varies from local or online retailers.

Cone Targets: Same use as the weighted targets just able to set them on the tops of a normal traffic cone which are usually present at scenes. Cost is around \$160.00 from DeChant Consulting Service.

FMT's or Field Marking Targets: Targets, similar to weighted and cone but able to be used in grassy medians and/or field where these other two targets might be blocked with grass or corn or beans etc. The targets are actually elevated on a pole to get the "dot" easier to see over the field obstruction. Cost is around \$149.00 from DeChant Consulting Service.

Tape Measures: Used to obtain 2 scale measurements at the scene to provide the iWitness software a ratio of pixels to units, to produces a measureable unit for documentation. Instead of saying the distance in the photographs is 600 pixels across, using a scale to pixels ratio by taking two measurements at the scene, it will report a feet, inches, mile etc. distance to the user.

Photo Only	Full Software
Camera	Camera
Memory Cards	Memory Cards
Tripod	Tripods
Targets (Weighted only)	Targets (Weighted, Cone, Field)
Tape Measure	Tape Measure
	iWitness Software
	Cadzone Software